



Carbon Capture and Utilization Feasibility for Mozambican Fossil Fuel Plants in the 2010s Context

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Abstract

Mozambique is a developing country with significant fossil fuel reserves, including natural gas and coal. A comprehensive literature review was conducted to evaluate existing CCUS technologies and their applicability to Mozambique's energy sector, considering economic viability and environmental impact. The analysis identified that while several CCUS technologies are feasible for Mozambican fossil fuel plants, they require substantial upfront investment and may face challenges related to infrastructure development and local community acceptance. CCUS is a promising technology for reducing greenhouse gas emissions from Mozambique's energy sector but requires careful planning and support mechanisms to ensure its implementation. Develop a national policy framework that incentivizes CCUS adoption, invest in research and development of new technologies, and engage stakeholders in decision-making processes. Carbon Capture and Utilization (CCUS), Mozambique, fossil fuel plants, climate change mitigation The empirical specification follows $Y = \beta_{0+\beta} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Carbon Capture, Utilization, and Storage (CCUS), Mozambique, Sub-Saharan Africa, Energy Economics, Carbon Dioxide Transport Networks, Renewable Integration Strategies*

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